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Terms	Documents
11 and discrepancy	6

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- US Pre-Grant Publication Full-Text Database
- JPO Abstracts Database
- EPO Abstracts Database
- Derwent World Patents Index
- IBM Technical Disclosure Bulletins

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11 and discrepancy

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<u>DB Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
USPT	11 and discrepancy	6	<a href="#">L8</a>
USPT	11 and discrepancy	6	<a href="#">L7</a>
USPT	11 and 15	0	<a href="#">L6</a>
USPT	14 and discrepancy	4	<a href="#">L5</a>
USPT	12 and 13	57	<a href="#">L4</a>
USPT	estimated adj1 data	677	<a href="#">L3</a>
USPT	actual adj1 data	8775	<a href="#">L2</a>
USPT	process adj2 reconciling	24	<a href="#">L1</a>

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USPT	11 and 15	0	<a href="#">L6</a>
USPT	14 and discrepancy	4	<a href="#">L5</a>
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USPT	estimated adj1 data	677	<a href="#">L3</a>
USPT	actual adj1 data	8775	<a href="#">L2</a>
USPT	process adj2 reconciling	24	<a href="#">L1</a>

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Refine Search:

11 and discrepancy

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**Search History****Today's Date: 4/4/2001**

<u>DB Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
USPT	11 and discrepancy	6	<u>L7</u>
USPT	11 and 15	0	<u>L6</u>
USPT	14 and discrepancy	4	<u>L5</u>
USPT	12 and 13	57	<u>L4</u>
USPT	estimated adj1 data	677	<u>L3</u>
USPT	actual adj1 data	8775	<u>L2</u>
USPT	process adj2 reconciling	24	<u>L1</u>

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l1 and discrepancy	6

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JPO Abstracts Database	
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Derwent World Patents Index	
IBM Technical Disclosure Bulletins	▼

**Refine Search:**

l1 and discrepancy	▲
	▼

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**Search History****Today's Date: 4/4/2001**

<u>DB Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
USPT	l1 and discrepancy	6	<a href="#">L7</a>
USPT	l1 and l5	0	<a href="#">L6</a>
USPT	l4 and discrepancy	4	<a href="#">L5</a>
USPT	l2 and l3	57	<a href="#">L4</a>
USPT	estimated adj1 data	677	<a href="#">L3</a>
USPT	actual adj1 data	8775	<a href="#">L2</a>
USPT	process adj2 reconciling	24	<a href="#">L1</a>

**WEST**

Generate Collection

**Search Results - Record(s) 1 through 6 of 6 returned.**☐ 1. Document ID: US 5832225 A

L8: Entry 1 of 6

File: USPT

Nov 3, 1998

US-PAT-NO: 5832225

DOCUMENT-IDENTIFIER: US 5832225 A

TITLE: Method computer program product and system for  
maintaining replication topology information

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 2. Document ID: US 5783808 A

L8: Entry 2 of 6

File: USPT

Jul 21, 1998

US-PAT-NO: 5783808

DOCUMENT-IDENTIFIER: US 5783808 A

TITLE: Electronic check presentment system having  
transaction level reconciliation capability

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
------	-------	----------	-------	--------	----------------	------	-----------	--------	------	-----------	-------

☐ 3. Document ID: US 5691524 A

L8: Entry 3 of 6

File: USPT

Nov 25, 1997

US-PAT-NO: 5691524

DOCUMENT-IDENTIFIER: US 5691524 A

TITLE: Electronic check presentment system having a non-ECP  
exceptions notification system incorporated therein

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
------	-------	----------	-------	--------	----------------	------	-----------	--------	------	-----------	-------

☐ 4. Document ID: US 5532464 A

L8: Entry 4 of 6

File: USPT

Jul 2, 1996

US-PAT-NO: 5532464

DOCUMENT-IDENTIFIER: US 5532464 A

TITLE: Electronic check presentment system having a return  
item notification system incorporated therein

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KMIC	Draw Desc	Image
------	-------	----------	-------	--------	----------------	------	-----------	--------	------	-----------	-------

☐ 5. Document ID: US 5412190 A

L8: Entry 5 of 6

File: USPT

May 2, 1995

US-PAT-NO: 5412190

DOCUMENT-IDENTIFIER: US 5412190 A

TITLE: Electronic check presentment system having a return  
item notification system incorporated therein

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KMIC	Draw Desc	Image
------	-------	----------	-------	--------	----------------	------	-----------	--------	------	-----------	-------

☐ 6. Document ID: US 5134564 A

L8: Entry 6 of 6

File: USPT

Jul 28, 1992

US-PAT-NO: 5134564

DOCUMENT-IDENTIFIER: US 5134564 A

TITLE: Computer aided reconfiliation method and apparatus

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KMIC	Draw Desc	Image
------	-------	----------	-------	--------	----------------	------	-----------	--------	------	-----------	-------

Terms	Documents
11 and discrepancy	6

Documents, starting with Document:

Display Format:

**WEST**

Generate Collection

L8: Entry 1 of 6

File: USPT

Nov 3, 1998

DOCUMENT-IDENTIFIER: US 5832225 A

TITLE: Method computer program product and system for  
maintaining replication topology information

## DEPR:

It is one purpose of the knowledge consistency checker to rectify any discrepancies as servers are added and deleted throughout the system or new naming contexts are replicated onto a given server. Furthermore, the knowledge consistency checker will ensure that each server on the site will be in one list or the other and that a server does not exist simultaneously on both lists.

## DEPR:

Box 237 encompasses the process steps of reconciling the intrasite replication information. For this exemplary embodiment, the replication information is stored directly within the root object of each naming context. Other implementations may store such intrasite replication information in other ways using other structures and those skilled in the art will undoubtedly see a variety of possibilities. The purpose of reconciling the intrasite replication information is for allowing the replication mechanism to efficiently and correctly replicate all naming contexts across a given site.

**WEST**

Generate Collection

L8: Entry 1 of 6

File: USPT

Nov 3, 1998

US-PAT-NO: 5832225

DOCUMENT-IDENTIFIER: US 5832225 A

TITLE: Method computer program product and system for  
maintaining replication topology information

DATE-ISSUED: November 3, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP	CODE	COUNTRY
Hacherl; Donald Joseph	North Bend	WA	N/A		N/A
Freeman; John	Redmond	WA	N/A		N/A

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP	CODE	COUNTRY	TYPE	CODE
Microsoft Corporation	Redmond	WA	N/A		N/A		02

APPL-NO: 8/ 678887

DATE FILED: July 12, 1996

INT-CL: [6] G06F 13/00

US-CL-ISSUED: 395/200.53; 707/200

US-CL-CURRENT: 709/223; 707/200FIELD-OF-SEARCH: 707/1, 707/201, 707/10, 707/101, 707/200,  
707/104, 711/141, 395/831, 395/200.53

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL



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Generate Collection

L8: Entry 1 of 6

File: USPT

Nov 3, 1998

US-PAT-NO: 5832225

DOCUMENT-IDENTIFIER: US 5832225 A

TITLE: Method computer program product and system for  
maintaining replication topology information

DATE-ISSUED: November 3, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hacherl; Donald Joseph	North Bend	WA	N/A	N/A
Freeman; John	Redmond	WA	N/A	N/A

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
Microsoft Corporation	Redmond	WA	N/A	N/A		02

APPL-NO: 8/ 678887

DATE FILED: July 12, 1996

INT-CL: [6] G06F 13/00

US-CL-ISSUED: 395/200.53; 707/200

US-CL-CURRENT: 709/223; 707/200FIELD-OF-SEARCH: 707/1, 707/201, 707/10, 707/101, 707/200,  
707/104, 711/141, 395/831, 395/200.53

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> 5434994	July 1995	Shaheen et al.	707/201
<input type="checkbox"/> 5586310	December 1996	Sharman	707/10
<input type="checkbox"/> 5588147	December 1996	Neeman et al.	707/1
<input type="checkbox"/> 5594921	January 1997	Pettus	395/831
<input type="checkbox"/> 5613079	March 1997	Debique et al.	711/141
<input type="checkbox"/> 5617568	April 1997	Ault et al.	707/101
<input type="checkbox"/> 5675787	October 1997	Miller et al.	707/104
<input type="checkbox"/> 5689700	November 1997	Miller et al.	707/10
<input type="checkbox"/> 5692180	November 1997	Lee	707/10

ART-UNIT: 276

PRIMARY-EXAMINER: Luu; Le Hein

ATTY-AGENT-FIRM: Workman, Nydegger, Seeley

ABSTRACT:

An automated method of maintaining replication topology information is presented that allows system maintenance to occur with a minimum of system administrator intervention. For a replicated and distributed database across a network of computers, the network is divided or partitioned into sites that are islands of good network connectivity wherein communication between the site computers occurs using high bandwidth, low-latency remote procedure calls (RPCs). Further, intersite connections allow communication between servers of different sites using a low bandwidth, high-latency store and forward messaging scheme. Knowledge consistency checkers running independently on each individual server in the entire network assures that the servers within a site are automatically connected in a full-mesh replication topology within a site and that the sites themselves are connected via a spanning tree of intersite links. The knowledge consistency checker enforced replication topology ensures that replication changes will be transmitted over intersite links as efficiently as possible so that each change will be transmitted over each "expensive" intersite link exactly once across a single direction in order to attain the minimum communication that must occur in order for all servers to be informed of such a change. A change arriving at a site replicates according to the intrasite replication mechanism.

12 Claims, 42 Drawing figures

**WEST**

Generate Collection

L8: Entry 2 of 6

File: USPT

Jul 21, 1998

US-PAT-NO: 5783808

DOCUMENT-IDENTIFIER: US 5783808 A

TITLE: Electronic check presentment system having transaction  
level reconciliation capability

DATE-ISSUED: July 21, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Josephson; Stanley M.	Dallas	TX	N/A	N/A

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
J. D. Carreker and Associates, Inc.	Dallas	TX	N/A	N/A	02	

APPL-NO: 8/ 584890

DATE FILED: January 11, 1996

INT-CL: [6] G06F 17/60

US-CL-ISSUED: 235/379

US-CL-CURRENT: 235/379

FIELD-OF-SEARCH: 235/379, 395/245

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> 4264808	April 1981	Owens et al.	235/379
<input type="checkbox"/> 4270042	May 1981	Case	235/379
<input type="checkbox"/> 4523330	June 1985	Cain	382/7
<input type="checkbox"/> 4694397	September 1987	Grant et al.	364/408
<input type="checkbox"/> 4823264	April 1989	Deming	364/408
<input type="checkbox"/> 4948174	August 1990	Thomson et al.	283/58
<input type="checkbox"/> 4974878	December 1990	Josephson	283/67
<input type="checkbox"/> 5038283	August 1991	Caveney	364/403
<input type="checkbox"/> 5121945	June 1992	Thomson et al.	283/58
<input type="checkbox"/> 5237159	August 1993	Stephens et al.	235/379
<input type="checkbox"/> 5265007	November 1993	Barnhard, Jr. et al.	364/408
<input type="checkbox"/> 5373550	December 1994	Campbell et al.	379/100
<input type="checkbox"/> 5412190	May 1995	Josephson et al.	235/379

## FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
164368	October 1982	JPX	364/408
187762	November 1982	JPX	235/379

## OTHER PUBLICATIONS

"V Series Item Processing System Tape Input/Output Module", UNISYS brochure, p. 5.  
Sales literature describing product by "StarChek" dated Feb. 17, 1995 entitled Star Check--Advance Notification System, p. 6.  
Sales literature entitled "Star Systems, Inc.--Overview" by StarChek, p. 12.  
Sales literature describing StarChek Advance Notification System dated Jul. 30, 1993, p. 4.  
Literature dated Sep. 6, 1993 entitled ". . . While Low Cost Alternative Gets Test Run with Eight Banks," p.1.  
Article dated Friday, May 26, 1995, from the "American Banker" entitled Star System Sets up Firm to Market Data Base for Thwarting Check Fraud, by Beth Piskora, p. 1.  
Article dated Jul. 1993 from "Checks & Checking" entitled California Banks Leading Assault on Check Fraud, p. 1.

ART-UNIT: 255

PRIMARY-EXAMINER: Evans; F. L.

ATTY-AGENT-FIRM: Hitt Chwang &amp; Gaines, P.C.

## ABSTRACT:

Disclosed are an improved electronic check presentment ("ECP") system having a non-ECP exceptions notification system

incorporated therein and a method of electronically communicating data pertaining to non-ECP exceptions. The method, for use by a presenting bank and a payor bank having check presentment systems between which data related to checks may be electronically transmitted, comprises the steps of: (1) electronically transmitting, from the presenting bank to the payor bank, predetermined presentment information relating to the checks and permitting a determination by the payor bank as to which of the checks are properly payable by the payor bank, (2) comparing records of an exceptions file with records of a receive control file, the exceptions file capable of containing records subject to both ECP and non-ECP exceptions to thereby produce an electronic file of the which of the checks are properly payable by the payor bank and (3) electronically transmitting the electronic file to the presenting bank to thereby provide advance electronic return notification of both ECP and non-ECP exceptions to checks presented by the presenting bank to the payor bank.

28 Claims, 19 Drawing figures

**WEST**

Generate Collection

L8: Entry 2 of 6

File: USPT

Jul 21, 1998

DOCUMENT-IDENTIFIER: US 5783808 A

TITLE: Electronic check presentment system having transaction level reconciliation capability

BSPR:

When the payor bank receives the cash letter, it verifies that the contents of the cash letter, i.e., the check amounts, balance with the totals contained on the cover letter. After a check processing function and posting process, the payor bank determines whether enough money exists in the payor customer's account to cover payment of the check and either accepts or rejects payment of the check. The payor bank then notifies the presenting bank regarding any balancing discrepancies or any transactions that are to be returned. The return is accomplished by physical transportation of the returned check to the presenting bank that originally accepted the check.

BSPR:

The present invention makes use of the electronic file to perform a reconciliation process to determine differences between the information extracted from each of the physical checks' MICR line and the information contained in the electronic file for each corresponding check. This comparison greatly simplifies the manual reconciliation process by detecting differences that are the result of physical check handling errors, equipment malfunctions, exception conditions and other discrepancies inherent in check processing operations. The automated reconcilment greatly improves the productivity of the reconcilment function because the reconciling clerk is able to use the automated difference report produced during the comparison process to quickly balance the paper cash letter. Differences such as missing checks, duplicate checks, extra checks, misread amounts and other invalid information can be identified on the difference report, allowing adjustments to be made prior to initiation of an account update or DDA process.

DEPR:

Referring now to FIG. 6, there is illustrated therein the ECP process of matching and reconciling the ECP cash letter transmission file to the paper capture file after completion of the DDA process. After the first paper pass, the file created of paper transactions are reconciled with the electronic file of transactions received the previous day by electronically matching the two data files in the sort/match process module 601. The purpose of this match is to determine if there were

any ECP transactions that were not present on the paper capture data file 509 and if there were any paper transactions that were not present on the updated ECP strip file 429. If the former were true, reversal transactions would be created and stored in a reversal file 607 to offset the unmatched ECP transaction at the next DDA processing cycle. If the latter condition were true, the physical paper transaction would be selected to be reentered according to the standard check capture method. (See FIG. 7.)

CLPV:

means for electronically generating and storing discrepancies between said electronic cash letters and said complementary paper cash letters identified by the payor bank in response to said reconciliation means.

**WEST**☐ Generate Collection

L8: Entry 3 of 6

File: USPT

Nov 25, 1997

US-PAT-NO: 5691524

DOCUMENT-IDENTIFIER: US 5691524 A

TITLE: Electronic check presentment system having a non-ECP  
exceptions notification system incorporated therein

DATE-ISSUED: November 25, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Josephson; Stanley M.	Dallas	TX	N/A	N/A

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
J.D. Carreker and Associates, Inc.	Dallas	TX	N/A	N/A	02	

APPL-NO: 8/ 648482

DATE FILED: May 15, 1996

## PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATION This application is a continuation of Ser. No. 08/236,632, filed Apr. 29, 1994 now abandoned which is a continuation-in-part of application Ser. No. 08/023,364, now U.S. Pat. No. 5,412,190 filed on Feb. 26, 1993, for an "Electronic Check Presentment System Having a Return Item Notification System Incorporated Therein," which was a continuation-in-part of original application Ser. No. 731,529, now U.S. Pat. No. 5,237,159 filed on Jul. 17, 1991 for an "Electronic Check Presentment System."

INT-CL: [6] G06F 17/60, G06F 15/30

US-CL-ISSUED: 235/379; 364/406, 364/408

US-CL-CURRENT: 705/40; 235/375, 705/42

FIELD-OF-SEARCH: 235/379, 364/401, 364/406, 364/408

## PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

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PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> 4264808	April 1981	Owens et al.	235/379
<input type="checkbox"/> 4270042	May 1981	Case	235/379
<input type="checkbox"/> 4523330	June 1985	Cain	382/7
<input type="checkbox"/> 4694397	September 1987	Grant et al.	364/408
<input type="checkbox"/> 4823264	April 1989	Deming	364/408
<input type="checkbox"/> 4948174	August 1990	Thomson et al.	283/58
<input type="checkbox"/> 4974878	December 1990	Josephson	283/67
<input type="checkbox"/> 5038283	August 1991	Caveney	364/403
<input type="checkbox"/> 5121945	June 1992	Thomson et al.	283/58
<input type="checkbox"/> 5237159	August 1993	Stephens et al.	235/379
<input type="checkbox"/> 5265007	November 1993	Barnhard, Jr. et al.	364/408
<input type="checkbox"/> 5373550	December 1994	Campbell et al.	235/379
<input type="checkbox"/> 5412190	May 1995	Josephson et al.	235/379

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FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
57-164368	October 1982	JPX	
57-187762	November 1982	JPX	

## OTHER PUBLICATIONS

"V Series Item Processing System Tape Input/Output Module",  
Unisys brochure, 5 pages.

ART-UNIT: 254

PRIMARY-EXAMINER: Hajec; Donald T.

ASSISTANT-EXAMINER: Rodriguez; Douglas X.

ATTY-AGENT-FIRM: Hitt, Chwang & Gaines, P.C.

## ABSTRACT:

Disclosed are an improved electronic check presentment ("ECP") system having a non-ECP exceptions notification system incorporated therein and a method of electronically communicating data pertaining to non-ECP exceptions. The method, for use by a presenting bank and a payor bank having check presentment systems between which data related to checks may be electronically transmitted, comprises the steps of: (1) electronically transmitting, from the presenting bank to the payor bank, predetermined presentment information relating to the checks and permitting a determination by the payor bank as to which of the checks are properly payable by the payor bank, (2) comparing records of an exceptions file with records of a receive control file, the exceptions file capable of containing records subject to both ECP and non-ECP exceptions to thereby produce an electronic file of the which of the checks are

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27 Claims, 19 Drawing figures

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L8: Entry 3 of 6

File: USPT

Nov 25, 1997

DOCUMENT-IDENTIFIER: US 5691524 A

TITLE: Electronic check presentment system having a non-ECP exceptions notification system incorporated therein

## BSPR:

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## BSPR:

The present invention makes use of the electronic file to perform a reconciliation process to determine differences between the information extracted from each of the physical checks' MICR line and the information contained in the electronic file for each corresponding check. This comparison greatly simplifies the manual reconciliation process by detecting differences that are the result of physical check handling errors, equipment malfunctions, exception conditions and other discrepancies inherent in check processing operations. The automated reconciling greatly improves the productivity of the reconciling function because the reconciling clerk is able to use the automated difference report produced during the comparison process to quickly balance the paper cash letter. Differences such as missing checks, duplicate checks, extra checks, misread amounts and other invalid information can be identified on the difference report, allowing adjustments to be made prior to initiation of an account update or DDA process.

## DEPR:

Referring now to FIG. 6, there is illustrated therein the ECP process of matching and reconciling the ECP cash letter transmission file to the paper capture file after completion of the DDA process. After the first paper pass, the file created of paper items are reconciled with the electronic file of items received the previous day by electronically matching the two data files in the sort/match process module 601. The purpose of this match is to determine if there were any ECP items that were not present on the paper capture data file 509 and if

were not present on the paper capture data file 509 and if there were any paper items that were not present on the updated ECP strip file 429. If the former were true, reversal transactions would be created and stored in a reversal file 607 to offset the unmatched ECP transaction at the next DDA processing cycle. If the latter condition were true, the physical paper item would be selected to be reentered according to the standard check capture method. (See FIG. 7.)

**WEST****End of Result Set**

Generate Collection

L8: Entry 6 of 6

File: USPT

Jul 28, 1992

US-PAT-NO: 5134564

DOCUMENT-IDENTIFIER: US 5134564 A

TITLE: Computer aided reconfiliation method and apparatus

DATE-ISSUED: July 28, 1992

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dunn; Eric C. W.	Palo Alto	CA	94303	N/A
Proulx; Thomas A.	Portola Valley	CA	94025	N/A

APPL-NO: 7/ 424006

DATE FILED: October 19, 1989

INT-CL: [5] G06F 15/30

US-CL-ISSUED: 364/406; 364/401, 364/408

US-CL-CURRENT: 705/33

FIELD-OF-SEARCH: 364/406, 364/401, 364/408, 382/7, 382/3,  
382/4, 382/5, 902/4, 902/40

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

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PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> 4047154	September 1977	Vitols et al.	340/146.3E
<input type="checkbox"/> 4417136	November 1983	Rushby et al.	235/379
<input type="checkbox"/> 4523330	June 1985	Cain	382/7
<input type="checkbox"/> 4737911	April 1988	Freeman, Jr.	364/406
<input type="checkbox"/> 4813077	March 1989	Woods et al.	382/7
<input type="checkbox"/> 4866611	September 1989	Cree et al.	364/900

ART-UNIT: 236

PRIMARY-EXAMINER: Smith; Jerry

ASSISTANT-EXAMINER: Cass; Russell E.

ABSTRACT:

A method of reconciling a first list (a bank statement) formed of a first number of first records and a second list (bank customer's list of records) formed of a second number of second records where the records affect the account balance for the bank statement. For each unmatched record in the first list, a corresponding record from the second list is selected based upon a match value. Whenever the match value exceeds a threshold value, the corresponding records from the first and second lists are paired and thereafter, are removed from further reconciliation processing. The highest match value resulting from comparing record elements and other attributes of records from the first and second lists is determined as a probable match for reconciliation.

26 Claims, 3 Drawing figures

**WEST****End of Result Set**

Generate Collection

L8: Entry 6 of 6

File: USPT

Jul 28, 1992

DOCUMENT-IDENTIFIER: US 5134564 A

TITLE: Computer aided reconfiliation method and apparatus

## BSPR:

To reconcile an account, the customer or other reconcile typically sorts the records into numerical order and arranges the cancelled checks and other bank statement records together with the customer's own accounting information so that they are all in view. For each transaction record on the bank statement, the customer visually scans the customer's own accounting information to identify a matching transaction record. Typically transactions are visually matched based on amount, serial number if any, and date range. If a bank transaction is paired with an identical customer transaction, the customer marks the paired records and continues to the next record until all records have been examined. If a close but not perfect match is found, the customer must determine the reason for the discrepancy. Then either the bank or the customer must correct any erroneous or missing information. After all records are matched and discrepancy noted, the reconciler totals (1) the amounts of checks listed in the customer records that have not yet cleared the bank, (2) the customer deposits not entered by the bank, and (3) bank transactions that the customer has not entered. The customer then calculates the correct ending balance as follows: True ending balance equals bank ending balance plus outstanding deposits or credits minus outstanding checks or debits. If the calculated ending balance equals the ending balance in the customer's accounting information, reconciliation is complete. If the balances do not equal, the reconciler must search for discrepancies or errors and correct them until the account is reconciled.

## BSPR:

Many banks offer a comparison service to help reconcile customers' accounts. For such services, each participating customer provides a copy of the customer's accounting information to the bank, usually in electronic form such as on disk, on tape or by computer transmission in a format specified by the bank. The bank enters the customer accounting information into the bank's computer. The bank's computer also contains the bank statement information for the customer. The bank's computer compares the bank and customer accounting information to prepare a report for the customer identifying discrepancies. Typically, the bank makes no effort to reconcile any discrepancies.

BSPR:

Some banks provide customers with a bank statement in electronic form. Typically, a customer electronically enters the data from the electronic bank statement into the customer's computer and the customer's computer compares the bank data with the customer's data, but this method offers no assistance in resolving discrepancies.

BSPR:

For a customer's account which has an average of four thousand records per month and a 2% difference rate, eighty non-identical records must be reconciled because of some discrepancy between the bank listing and the customer listing. At the time of reconciliation, a customer will normally have entered records into the customers accounting information for transactions in the next accounting period so that the customer's list of records is usually larger than the bank's list of records and this difference makes the reconciliation process more difficult.

BSPR:

For example, bank service charges of many different types are entered by the bank into the bank statement and often this information is not added to the customer's list of records. Other transactions which appear on records on a bank list include credits, reversal of charges, and insufficient funds transactions. These bank records often lead to discrepancies between a bank listing of records and a corresponding customer listing of records.

BSPR:

Other sources of discrepancies between the bank listing and the customer listing are errors in records that are introduced either by the bank or by the customer. For example, one common error is the transposition of digits in either the date element or in the amount element. Another common type of error is the omission of a check number. Also, certain records in a bank listing have no record number. For example, bank service charges or withdrawals from automatic tellers ATMs) have no "check" number.

BSPR:

The difficulty of reconciling records having discrepancies due to errors can become complex and is a function of the number of records having discrepancies, the number of records in one listing having no corresponding records in the other listing, and in the nature of errors causing discrepancies. For example, if a business tends to write a large number of checks for similar dollar amounts on similar dates, it is difficult to correlate visually a record in a bank list with a similar record (particularly when a difference due to an error or otherwise exists) in the customer list. Such a correlation is further compounded if transactions of like or similar dollar amounts omit a check number for reasons of error or otherwise.

BSPR:



While the above and other methods compare lists of accounting records to identify discrepancies, none of those methods adequately assist in reconciling discrepancies.

BSPR:

The method of determining the match value relies upon assigning probability values to differences between elements being compared where the elements for a checking account are typically the record number for a check, the record date, and the record amount. Furthermore, different characteristics of each of the elements are analyzed and any discrepancies in such characteristics are also assigned probability values.

DEPR:

Processes for reconciling accounts vary depending on the individual customer. The prerequisites for account reconciliation are (1) a bank account statement, and (2) customer accounting information.

DEPR:

The present invention accomplishes the reconciliation process using a computer. The customer account holder keeps computerized accounting information and typically receives a computerized bank account statement from the bank. The customer accounting information typically incorporates a number of "drivers", which are programs that read accounting information from publicly available software packages. Drivers may directly read accounting data from a particular software package, or they may indirectly read information that the reconciler has created via a function of the software used to create the information. In either case, the customer typically uses the customer's existing information created over the accounting period, rather than requiring a re-keying of each transaction, or the customer uses data extracted from existing accounting information by means of basic export functions rather than requiring new programming to make the data usable. Once both the customer's and the bank's information, are loaded into the computer, the reconciliation process commences. If discrepancies are found, the process displays a bank statement record on a screen along with the closest match found. The user chooses among several potential courses of action to resolve the discrepancy. When all transactions from the bank statement have been paired or corrected, the customer may choose to print reconciliation reports. The customer can change the customer account information, or contact the bank to change theirs, depending on which party made errors, if any. Reconciliation is then complete. This process is repeated whenever a bank statement is produced, often monthly.

DEPR:

Automating the bank reconciliation process requires bringing the customer's data and the bank's data together on a computer. Once the data is available, it must be matched up accurately and rapidly. To fully automate the matching process, the software must provide an efficient method for dealing with discrepancies between the customer's information and the bank's statement. Frequently, coping with the discrepancies is the

most time-consuming part of reconciling a bank statement. The present invention provides a deterministic, error-free approach to reconciling which quickly deals with exactly-matching records and then handles the non-exactly-matching records in an efficient manner.

**WEST**[Generate Collection](#)**Search Results - Record(s) 1 through 4 of 4 returned.**☐ 1. Document ID: US 6085127 A

L5: Entry 1 of 4

File: USPT

Jul 4, 2000

US-PAT-NO: 6085127

DOCUMENT-IDENTIFIER: US 6085127 A

TITLE: Fault tolerant automatic control system utilizing analytic redundancy

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 2. Document ID: US 6063028 A

L5: Entry 2 of 4

File: USPT

May 16, 2000

US-PAT-NO: 6063028

DOCUMENT-IDENTIFIER: US 6063028 A

TITLE: Automated treatment selection method

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 3. Document ID: US 5819188 A

L5: Entry 3 of 4

File: USPT

Oct 6, 1998

US-PAT-NO: 5819188

DOCUMENT-IDENTIFIER: US 5819188 A

TITLE: Fault tolerant automatic control system utilizing analytic redundancy

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
------	-------	----------	-------	--------	----------------	------	-----------	--------	------	-----------	-------

☐ 4. Document ID: US 5615119 A

L5: Entry 4 of 4

File: USPT

Mar 25, 1997

US-PAT-NO: 5615119

DOCUMENT-IDENTIFIER: US 5615119 A

TITLE: Fault tolerant automatic control system utilizing  
analytic redundancy

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw. Desc	Image
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Generate Collection

Terms	Documents
14 and discrepancy	4

Display

20

Documents, starting with Document:

4

**Display Format:**

TI

Change Format

**WEST**

Generate Collection

L5: Entry 3 of 4

File: USPT

Oct 6, 1998

US-PAT-NO: 5819188

DOCUMENT-IDENTIFIER: US 5819188 A

TITLE: Fault tolerant automatic control system utilizing  
analytic redundancy

DATE-ISSUED: October 6, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Vos; David W.	Boston	MA	N/A	N/A

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
Aurora Flight Sciences Corporation	Manassas	VA	N/A	N/A		02

APPL-NO: 8/ 819829

DATE FILED: March 18, 1997

## PARENT-CASE:

This application is a continuation of application Ser. No.  
08/477,500 filed Jun. 7, 1995 now U.S. Pat. No. 5,615,119.

INT-CL: [6] G06F 165/00

US-CL-ISSUED: 701/4; 701/29, 701/34, 244/194

US-CL-CURRENT: 701/4; 244/194, 701/29, 701/34FIELD-OF-SEARCH: 701/3, 701/4, 701/29, 701/34, 701/35, 318/563,  
318/564, 244/194, 244/75R, 371/67.1

## PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> <u>4644538</u>	February 1987	Cooper et al.	364/434
<input type="checkbox"/> <u>4649484</u>	March 1987	Herzog et al.	364/434
<input type="checkbox"/> <u>5274554</u>	December 1993	Takats et al.	364/424.03
<input type="checkbox"/> <u>5289377</u>	February 1994	Yokote et al.	364/424.04
<input type="checkbox"/> <u>5297052</u>	March 1994	McIntyre et al.	364/434
<input type="checkbox"/> <u>5493497</u>	February 1996	Buus	364/434
<input type="checkbox"/> <u>5615119</u>	March 1997	Vos	701/4

## OTHER PUBLICATIONS

Textbook entitled "Aircraft Dynamics And Automatic Control", chapter 4 entitled Elementary Theory of Nonlinear Feedback For Single-Input Single-Output systems.

Phd Thesis of David voss entitled Nonlinear Control Of An Autonomoum Unicycle Robot: Practical Issues.

A Geometric Approach To The Synthesis Of Failure Detection Filters, by Mohammad-Ali Massoumnia.

"Application OF nonlinear Transformations To Automatic Flight Control" by G. Meyer, R. Su, and L.R. Hunt.

"Global Transformations Of Nonlinear Systems" by L.R. Hunt, et al.

"Detecting Changes In Signals And Systems -A Survey" by Michele Bassaville.

Textbook entitled "Nonlinear Dynamicla Control Systems", chapter 5 entitled State Space Transformation And Feedback.

ART-UNIT: 364

PRIMARY-EXAMINER: Chin; Gary

ATTY-AGENT-FIRM: Fitzpatrick, Cella, Harper & Scinto

## ABSTRACT:

Method and apparatus for a fault tolerant automatic control system for a dynamic device having a sensor and a predetermined control algorithm include structure and steps for receiving a status signal from the sensor. Structure and steps are provided for transforming the sensor status signal and a predetermined reference signal into a linear time invariant coordinate system, generating a sensor estimate in the linear time invariant coordinate system based on the transformed sensor status signal and the transformed reference signal, transforming the sensor estimate into a physical coordinate system, detecting an error in the sensor status signal based on a comparison of the transformed sensor estimate and the sensor status signal, and reconfiguring the predetermined control algorithm based on the detected error. Preferably, the apparatus and method are implemented in an aircraft flight control system capable of detecting an aircraft sensor fault and reconfiguring the flight control program such that flight control surface actuators are commanded by ignoring or mitigating the failed sensor.

20 Claims, 8 Drawing figures

**WEST****End of Result Set**☐

Generate Collection

L5: Entry 4 of 4

File: USPT

Mar 25, 1997

US-PAT-NO: 5615119

DOCUMENT-IDENTIFIER: US 5615119 A

TITLE: Fault tolerant automatic control system utilizing  
analytic redundancy

DATE-ISSUED: March 25, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Vos; David W.	Boston	MA	N/A	N/A

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
Aurora Flight Sciences Corporation	Manassas	VA	N/A	N/A		02

APPL-NO: 8/ 477500

DATE FILED: June 7, 1995

INT-CL: [6] G06F 165/00

US-CL-ISSUED: 364/424.013; 364/424.34, 244/194

US-CL-CURRENT: 701/4; 244/194, 701/29

FIELD-OF-SEARCH: 364/433, 364/434, 364/424.03, 364/424.04,  
364/184, 364/187, 318/563, 318/564, 244/194, 244/75R, 371/7,  
371/11.1, 371/67.1

## PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

Search Selected

Search ALL

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> 4644538	February 1987	Cooper et al.	364/434
<input type="checkbox"/> 4649484	March 1987	Herzog et al.	364/434
<input type="checkbox"/> 5274554	December 1993	Takats et al.	364/424.03
<input type="checkbox"/> 5289377	February 1994	Yokote et al.	364/424.04
<input type="checkbox"/> 5297052	March 1994	McIntyre et al.	364/434
<input type="checkbox"/> 5493497	February 1996	Buus	364/434



## OTHER PUBLICATIONS

Textbook entitled "Aircraft Dynamics And Automatic Control", chapter 4 entitled Elementary Theory of Nonlinear Feedback For Single-Input Single-Output Systems.

"Detecting Changes In Signals And Systems--A Survey" by Michele Basseville.

Textbook entitled "Nonlinear Dynamic Control Systems" chapter 5 entitled State Space Transformation And Feedback.

Phd Thesis of David Voss entitled "Nonlinear Control Of An Autonomous Unicycle Robot: Practical Issues".

"A Geometric Approach to the Synthesis Of Failure Detection Filters", by Mohammad-Ali Massoumnia.

"Application of Nonlinear Transformations To Automatic Flight Control" by G. Meyer, R. Su, and L. R. Hunt.

"Global Transformations of Nonlinear Systems" by L. R. Hunt et al.

ART-UNIT: 234

PRIMARY-EXAMINER: Chin; Gary

ATTY-AGENT-FIRM: Fitzpatrick, Cella, Harper & Scinto

## ABSTRACT:

Method and apparatus for a fault tolerant automatic control system for a dynamic device having a sensor and a predetermined control algorithm include structure and steps for receiving a status signal from the sensor. Structure and steps are provided for transforming the sensor status signal and a predetermined reference signal into a linear time invariant coordinate system, generating a sensor estimate in the linear time invariant coordinate system based on the transformed sensor status signal and the transformed reference signal, transforming the sensor estimate into a physical coordinate system, detecting an error in the sensor status signal based on a comparison of the transformed sensor estimate and the sensor status signal, and reconfiguring the predetermined control algorithm based on the detected error. Preferably, the apparatus and method are implemented in an aircraft flight control system capable of detecting an aircraft sensor fault and reconfiguring the flight control program such that flight control surface actuators are commanded by ignoring or mitigating the failed sensor.

20 Claims, 8 Drawing figures

**WEST****End of Result Set**

Generate Collection

L5: Entry 4 of 4

File: USPT

Mar 25, 1997

US-PAT-NO: 5615119

DOCUMENT-IDENTIFIER: US 5615119 A

TITLE: Fault tolerant automatic control system utilizing  
analytic redundancy

DATE-ISSUED: March 25, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Vos; David W.	Boston	MA	N/A	N/A

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
Aurora Flight Sciences Corporation	Manassas	VA	N/A	N/A	02	

APPL-NO: 8/ 477500

DATE FILED: June 7, 1995

INT-CL: [6] G06F 165/00

US-CL-ISSUED: 364/424.013; 364/424.34, 244/194

US-CL-CURRENT: 701/4; 244/194, 701/29

FIELD-OF-SEARCH: 364/433, 364/434, 364/424.03, 364/424.04,  
364/184, 364/187, 318/563, 318/564, 244/194, 244/75R, 371/7,  
371/11.1, 371/67.1

## PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

Search Selected

Search ALL

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> 4644538	February 1987	Cooper et al.	364/434
<input type="checkbox"/> 4649484	March 1987	Herzog et al.	364/434
<input type="checkbox"/> 5274554	December 1993	Takats et al.	364/424.03
<input type="checkbox"/> 5289377	February 1994	Yokote et al.	364/424.04
<input type="checkbox"/> 5297052	March 1994	McIntyre et al.	364/434
<input type="checkbox"/> 5493497	February 1996	Buus	364/434

## OTHER PUBLICATIONS

Textbook entitled "Aircraft Dynamics And Automatic Control", chapter 4 entitled Elementary Theory of Nonlinear Feedback For Single-Input Single-Output Systems.  
"Detecting Changes In Signals And Systems--A Survey" by Michele Basseville.  
Textbook entitled "Nonlinear Dynamic Control Systems" chapter 5 entitled State Space Transformation And Feedback.  
Phd Thesis of David Voss entitled "Nonlinear Control Of An Autonomous Unicycle Robot: Practical Issues".  
"A Geometric Approach to the Synthesis Of Failure Detection Filters", by Mohammad-Ali Massoumnia.  
"Application of Nonlinear Transformations To Automatic Flight Control" by G. Meyer, R. Su, and L. R. Hunt.  
"Global Transformations of Nonlinear Systems" by L. R. Hunt et al.

ART-UNIT: 234

PRIMARY-EXAMINER: Chin; Gary

ATTY-AGENT-FIRM: Fitzpatrick, Cella, Harper & Scinto

## ABSTRACT:

Method and apparatus for a fault tolerant automatic control system for a dynamic device having a sensor and a predetermined control algorithm include structure and steps for receiving a status signal from the sensor. Structure and steps are provided for transforming the sensor status signal and a predetermined reference signal into a linear time invariant coordinate system, generating a sensor estimate in the linear time invariant coordinate system based on the transformed sensor status signal and the transformed reference signal, transforming the sensor estimate into a physical coordinate system, detecting an error in the sensor status signal based on a comparison of the transformed sensor estimate and the sensor status signal, and reconfiguring the predetermined control algorithm based on the detected error. Preferably, the apparatus and method are implemented in an aircraft flight control system capable of detecting an aircraft sensor fault and reconfiguring the flight control program such that flight control surface actuators are commanded by ignoring or mitigating the failed sensor.

20 Claims, 8 Drawing figures

**WEST**[Generate Collection](#)**Search Results - Record(s) 1 through 20 of 24 returned.**☐ 1. Document ID: US 6160874 A

L1: Entry 1 of 24

File: USPT

Dec 12, 2000

US-PAT-NO: 6160874

DOCUMENT-IDENTIFIER: US 6160874 A

TITLE: Validation gateway

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KMIC	Draw Desc	Image
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☐ 2. Document ID: US 6098079 A

L1: Entry 2 of 24

File: USPT

Aug 1, 2000

US-PAT-NO: 6098079

DOCUMENT-IDENTIFIER: US 6098079 A

TITLE: File version reconciliation using hash codes

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KMIC	Draw Desc	Image
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☐ 3. Document ID: US 6091422 A

L1: Entry 3 of 24

File: USPT

Jul 18, 2000

US-PAT-NO: 6091422

DOCUMENT-IDENTIFIER: US 6091422 A

TITLE: System for editing complex visual data providing a continuously updated rendering

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KMIC	Draw Desc	Image
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☐ 4. Document ID: US 6076067 A

L1: Entry 4 of 24

File: USPT

Jun 13, 2000

US-PAT-NO: 6076067

DOCUMENT-IDENTIFIER: US 6076067 A

TITLE: System and method for incorporating origination and destination effects into a vehicle assignment process

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw Desc	Image
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☐ 5. Document ID: US 5987506 A

L1: Entry 5 of 24                      File: USPT                      Nov 16, 1999

US-PAT-NO: 5987506

DOCUMENT-IDENTIFIER: US 5987506 A

TITLE: Remote access and geographically distributed  
computers in a globally addressable storage environment

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw Desc	Image
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☐ 6. Document ID: US 5870764 A

L1: Entry 6 of 24                      File: USPT                      Feb 9, 1999

US-PAT-NO: 5870764

DOCUMENT-IDENTIFIER: US 5870764 A

TITLE: Method of managing a data structure for concurrent  
serial and parallel revision of a work

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw Desc	Image
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☐ 7. Document ID: US 5857207 A

L1: Entry 7 of 24                      File: USPT                      Jan 5, 1999

US-PAT-NO: 5857207

DOCUMENT-IDENTIFIER: US 5857207 A

TITLE: Storage manager for computer system

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw Desc	Image
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☐ 8. Document ID: US 5855005 A

L1: Entry 8 of 24                      File: USPT                      Dec 29, 1998

US-PAT-NO: 5855005

DOCUMENT-IDENTIFIER: US 5855005 A

TITLE: System for electronically auditing exposures used for  
determining insurance premiums

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 9. Document ID: US 5832225 A

L1: Entry 9 of 24

File: USPT

Nov 3, 1998

US-PAT-NO: 5832225

DOCUMENT-IDENTIFIER: US 5832225 A

TITLE: Method computer program product and system for  
maintaining replication topology information

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 10. Document ID: US 5799321 A

L1: Entry 10 of 24

File: USPT

Aug 25, 1998

US-PAT-NO: 5799321

DOCUMENT-IDENTIFIER: US 5799321 A

TITLE: Replicating deletion information using sets of  
deleted record IDs

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 11. Document ID: US 5783808 A

L1: Entry 11 of 24

File: USPT

Jul 21, 1998

US-PAT-NO: 5783808

DOCUMENT-IDENTIFIER: US 5783808 A

TITLE: Electronic check presentment system having  
transaction level reconciliation capability

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 12. Document ID: US 5758347 A

L1: Entry 12 of 24

File: USPT

May 26, 1998

US-PAT-NO: 5758347

DOCUMENT-IDENTIFIER: US 5758347 A

TITLE: Layered storage structure for computer data storage  
manager

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 13. Document ID: US 5691524 A

L1: Entry 13 of 24

File: USPT

Nov 25, 1997

US-PAT-NO: 5691524

DOCUMENT-IDENTIFIER: US 5691524 A

TITLE: Electronic check presentment system having a non-ECP exceptions notification system incorporated therein

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 14. Document ID: US 5619695 A

L1: Entry 14 of 24

File: USPT

Apr 8, 1997

US-PAT-NO: 5619695

DOCUMENT-IDENTIFIER: US 5619695 A

TITLE: Method and apparatus for scheduling resources

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 15. Document ID: US 5532464 A

L1: Entry 15 of 24

File: USPT

Jul 2, 1996

US-PAT-NO: 5532464

DOCUMENT-IDENTIFIER: US 5532464 A

TITLE: Electronic check presentment system having a return item notification system incorporated therein

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 16. Document ID: US 5527003 A

L1: Entry 16 of 24

File: USPT

Jun 18, 1996

US-PAT-NO: 5527003

DOCUMENT-IDENTIFIER: US 5527003 A

TITLE: Method for in-field updating of the gyro thermal calibration of an inertial navigation system

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 17. Document ID: US 5500322 A

L1: Entry 17 of 24

File: USPT

Mar 19, 1996

US-PAT-NO: 5500322

DOCUMENT-IDENTIFIER: US 5500322 A

TITLE: Developer additive, toner and developer composition

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 18. Document ID: US 5412190 A

L1: Entry 18 of 24

File: USPT

May 2, 1995

US-PAT-NO: 5412190

DOCUMENT-IDENTIFIER: US 5412190 A

TITLE: Electronic check presentment system having a return item notification system incorporated therein

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 19. Document ID: US 5372386 A

L1: Entry 19 of 24

File: USPT

Dec 13, 1994

US-PAT-NO: 5372386

DOCUMENT-IDENTIFIER: US 5372386 A

TITLE: Automated reconciliation system

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 20. Document ID: US 5354098 A

L1: Entry 20 of 24

File: USPT

Oct 11, 1994

US-PAT-NO: 5354098

DOCUMENT-IDENTIFIER: US 5354098 A

TITLE: Automated reconciliation system

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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[Generate Collection](#)



Terms	Documents
process adj2 reconciling	24

Documents, starting with Document:

**Display Format:**

**WEST**

Generate Collection

L1: Entry 18 of 24

File: USPT

May 2, 1995

US-PAT-NO: 5412190

DOCUMENT-IDENTIFIER: US 5412190 A

TITLE: Electronic check presentment system having a return item  
notification system incorporated therein

DATE-ISSUED: May 2, 1995

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Josephson; Stanley M.	Dallas	TX	N/A	N/A
Kopsec; Michael F.	Grapevine	TX	N/A	N/A
Royal; P. Darrell	Dallas	TX	N/A	N/A
Stephens; Thomas S.	Addison	TX	N/A	N/A
Thompson; Mitchell D.	Dallas	TX	N/A	N/A

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
J. D. Carreker & Associates, Inc.	Dallas	TX	N/A	N/A	02	

DISCLAIMER DATE: 20100819

APPL-NO: 8/ 023364

DATE FILED: February 26, 1993

## PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATION This application is a  
continuation in part of application Ser. No. 731,529, filed on  
Jul. 17, 1991 for "Electronic Check Presentment System" now  
U.S. Pat. No. 5,237,159.

INT-CL: [6] G06F 15/30

US-CL-ISSUED: 235/379; 364/406, 364/408

US-CL-CURRENT: 705/45; 235/379

FIELD-OF-SEARCH: 235/379, 364/401, 364/406, 364/408

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> 4823264	April 1989	Deming	364/408
<input type="checkbox"/> 4948174	August 1990	Thomson et al.	283/58
<input type="checkbox"/> 4974878	December 1990	Josephson	283/67
<input type="checkbox"/> 5121945	June 1992	Thomson et al.	283/58
<input type="checkbox"/> 5237159	August 1993	Stephens et al.	235/379
<input type="checkbox"/> 5265007	November 1993	Barnhard, Jr. et al.	235/379

## FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
187762	November 1982	JPX	235/379

ART-UNIT: 254

PRIMARY-EXAMINER: Shepperd; John

ATTY-AGENT-FIRM: Konneker Bush Hitt &amp; Chwang

## ABSTRACT:

An Improved Electronic Check Presentment System Having a Return Item Notification System Incorporated Therein provides banks with a fully automated capability to receive early notification of checks that it previously presented to a payor bank and that have subsequently been identified by the payor bank as return checks or unpaid items. Moreover, the Improved Electronic Check Presentment System allows those banks utilizing it to transmit return notifications to downstream correspondent banks and customers. Additionally, the Improved Electronic Check Presentment System Having a Return Item Notification System Incorporated Therein provides presenting banks with the capability to automatically instruct the payor banks' systems as to the method of handling particular return checks, in advance of any return or pay/no pay decision by a payor bank, through the capability to append a selected disposition code to the electronic information associated with the check, at the time the check is initially processed by the presenting bank. As a by-product, the Improved Electronic Check Presentment System provides presenting banks with the capability to correlate item sequence numbers assigned to checks by other banks with different item sequence numbers originally assigned to these checks by the presenting bank. It also provides the capability to reconcile paper checks to electronic check records, even in the event that the paper checks are not in the same order as the electronic check records.

31 Claims, 17 Drawing figures

**WEST**

Generate Collection

L1: Entry 18 of 24

File: USPT

May 2, 1995

DOCUMENT-IDENTIFIER: US 5412190 A

TITLE: Electronic check presentment system having a return item notification system incorporated therein

## DEPR:

Referring now to FIG. 6, there is illustrated therein the ECP process of matching and reconciling the ECP cash letter transmission file to the paper capture file. After the first paper pass, the file created of paper items are reconciled with the electronic file of items received the previous day by electronically matching the two data files in the sort/match process module 601. The purpose of this match is to determine if there were any ECP items that were not present on the paper capture data file 509 and if there were any paper items that were not present on the updated ECP strip file 429. If the former were true, reversal transactions would be created and stored in a reversal file 607 to offset the unmatched ECP transaction. If the latter condition were true, the physical paper item would be selected to be reentered according to the standard check capture method. (See FIG. 7)

**WEST**

Generate Collection

L1: Entry 19 of 24

File: USPT

Dec 13, 1994

US-PAT-NO: 5372386

DOCUMENT-IDENTIFIER: US 5372386 A

TITLE: Automated reconciliation system

DATE-ISSUED: December 13, 1994

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Mills; William B.	No. Attleboro	MA	02760	N/A

APPL-NO: 8/ 195637

DATE FILED: February 15, 1994

## PARENT-CASE:

This application is a continuation-in-part of U.S. patent application Ser. No. 08/157,418 filed on Nov. 26, 1993, now abandoned.

INT-CL: [5] B42D 15/00

US-CL-ISSUED: 283/67; 283/103, 283/105, 235/385, 340/825.34

US-CL-CURRENT: 283/67; 235/385, 283/103, 283/105, 340/5.4, 340/5.8, 340/5.9

FIELD-OF-SEARCH: 283/67, 283/70, 283/94, 283/100, 283/101, 283/103, 283/105, 283/72, 235/375, 235/385, 235/449, 340/825.34

## PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

☐ Search Selected☐ Search ALL

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> 402136	April 1889	Brain	283/103
<input type="checkbox"/> 480423	August 1892	Crowell	283/67
<input type="checkbox"/> 480424	August 1892	Crowell	283/67
<input type="checkbox"/> 607339	July 1898	Burland	283/105
<input type="checkbox"/> 733218	July 1903	Kitsee	283/105
<input type="checkbox"/> 965362	July 1910	Beals	283/100
<input type="checkbox"/> 4816824	March 1989	Katz et al.	340/825.34
<input type="checkbox"/> 4836378	June 1989	Lephardt	206/459.1

ART-UNIT: 324

PRIMARY-EXAMINER: Seidel; Richard K.

ASSISTANT-EXAMINER: Payer; Hwei-Siu

ATTY-AGENT-FIRM: Barlow & Barlow, Ltd.

ABSTRACT:

An automated reconciliation system that permits instantaneous reconciliation of unsold product units. A pull tab, which contains hidden reconciliation data is affixed to a product unit. To reconcile the particular product unit, a vendor removes the pull tab strip thereby defacing and destroying the product unit to expose the reconciliation data needed for entry into a central computer system. Alternatively, concealed reconciliation data may be printed directly on the product or its packaging in a fashion which requires the product to be opened to expose the reconciliation data. Such an opened condition, with a broken seal or opened wrapping, renders the product unsaleable. The automated reconciliation system ensures that unsold product units which receive reconciliation credit and reimbursement are not fraudulently resold.

44 Claims, 16 Drawing figures

**WEST**

Generate Collection

L1: Entry 19 of 24

File: USPT

Dec 13, 1994

DOCUMENT-IDENTIFIER: US 5372386 A

TITLE: Automated reconciliation system

## DEPR:

At the end of the day, the vendor begins the process for reconciling unsold newspapers. As seen in FIG. 7, pull tab 10 is drawn in a downward fashion to separate central portion 14 from outer portions 16 and 18 along perforations 20. When central portion 14 is completely drawn, front page 42 is completely severed from the remainder of the newspaper, rendering it unsaleable. Once the central portion 14 of pull tab 10 has been removed, hidden reconciliation data is exposed, as seen in FIGS. 8 and 9, by pulling on string 24 to locate the reconciliation data 22 and to peel away newspaper strip 44 which was glued to pull tab strip 10 and ripped away from the remainder of the newspaper when the pull tab strip was removed. As can be seen in FIG. 9, pulling of string 24 releases flap 46 of newspaper material to expose central portion 14 and reconciliation data thereon.

**WEST**

Generate Collection

L1: Entry 20 of 24

File: USPT

Oct 11, 1994

US-PAT-NO: 5354098

DOCUMENT-IDENTIFIER: US 5354098 A

TITLE: Automated reconciliation system

DATE-ISSUED: October 11, 1994

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Mills; William B.	North Attleboro	MA	02760	N/A

APPL-NO: 8/ 157418

DATE FILED: November 26, 1993

INT-CL: [5] B42D 15/00

US-CL-ISSUED: 283/67; 283/103, 283/105, 235/385

US-CL-CURRENT: 283/67; 235/385, 283/103, 283/105

FIELD-OF-SEARCH: 283/67, 283/70, 283/94, 283/100, 283/101,  
283/103, 283/105, 283/72, 235/375, 235/385, 235/449, 340/825.34

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

Search Selected

Search ALL

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> 402136	April 1889	Brain	283/103
<input type="checkbox"/> 480423	August 1892	Crowell	283/67
<input type="checkbox"/> 480424	August 1892	Crowell	283/67
<input type="checkbox"/> 607339	July 1898	Burland	283/105
<input type="checkbox"/> 733218	July 1903	Kitsee	283/105
<input type="checkbox"/> 965362	July 1910	Beals	283/100
<input type="checkbox"/> 4176260	November 1979	Ward et al.	235/385
<input type="checkbox"/> 4816824	March 1989	Katz et al.	340/825.34
<input type="checkbox"/> 4836378	June 1989	Lephardt	206/459

ART-UNIT: 324

PRIMARY-EXAMINER: Seidel; Richard K.

ASSISTANT-EXAMINER: Payer; Hwei-Siu



ATTY-AGENT-FIRM: Barlow & Barlow, Ltd.

ABSTRACT:

An automated reconciliation system that permits instantaneous reconciliation of unsold publications. A pull tab, which contains hidden reconciliation data is affixed to a publication. To reconcile the particular publication, a vendor removes the pull tab strip thereby defacing the publication to expose the reconciliation data needed for entry into a central computer system. The automated reconciliation system ensures that unsold publications which receive reconciliation credit and reimbursement are not fraudulently resold.

26 Claims, 12 Drawing figures

**WEST**

Generate Collection

L1: Entry 21 of 24

File: USPT

Jul 28, 1992

US-PAT-NO: 5134564

DOCUMENT-IDENTIFIER: US 5134564 A

TITLE: Computer aided reconfiliation method and apparatus

DATE-ISSUED: July 28, 1992

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dunn; Eric C. W.	Palo Alto	CA	94303	N/A
Proulx; Thomas A.	Portola Valley	CA	94025	N/A

APPL-NO: 7/ 424006

DATE FILED: October 19, 1989

INT-CL: [5] G06F 15/30

US-CL-ISSUED: 364/406; 364/401, 364/408

US-CL-CURRENT: 705/33

FIELD-OF-SEARCH: 364/406, 364/401, 364/408, 382/7, 382/3, 382/4, 382/5, 902/4, 902/40

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

☐ Search Selected☐ Search ALL

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> 4047154	September 1977	Vitols et al.	340/146.3E
<input type="checkbox"/> 4417136	November 1983	Rushby et al.	235/379
<input type="checkbox"/> 4523330	June 1985	Cain	382/7
<input type="checkbox"/> 4737911	April 1988	Freeman, Jr.	364/406
<input type="checkbox"/> 4813077	March 1989	Woods et al.	382/7
<input type="checkbox"/> 4866611	September 1989	Cree et al.	364/900

ART-UNIT: 236

PRIMARY-EXAMINER: Smith; Jerry

ASSISTANT-EXAMINER: Cass; Russell E.

ABSTRACT:

A method of reconciling a first list (a bank statement) formed

of a first number of first records and a second list (bank customer's list of records) formed of a second number of second records where the records affect the account balance for the bank statement. For each unmatched record in the first list, a corresponding record from the second list is selected based upon a match value. Whenever the match value exceeds a threshold value, the corresponding records from the first and second lists are paired and thereafter, are removed from further reconciliation processing. The highest match value resulting from comparing record elements and other attributes of records from the first and second lists is determined as a probable match for reconciliation.

26 Claims, 3 Drawing figures

**WEST**

Generate Collection

L1: Entry 21 of 24

File: USPT

Jul 28, 1992

DOCUMENT-IDENTIFIER: US 5134564 A

TITLE: Computer aided reconfiliation method and apparatus

DEPR:

Processes for reconciling accounts vary depending on the individual customer. The prerequisites for account reconciliation are (1) a bank account statement, and (2) customer accounting information.

**WEST**[Generate Collection](#)**Search Results - Record(s) 21 through 24 of 24 returned.**☐ 21. Document ID: US 5134564 A

L1: Entry 21 of 24

File: USPT

Jul 28, 1992

US-PAT-NO: 5134564

DOCUMENT-IDENTIFIER: US 5134564 A

TITLE: Computer aided reconfiliation method and apparatus

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 22. Document ID: US 4866611 A

L1: Entry 22 of 24

File: USPT

Sep 12, 1989

US-PAT-NO: 4866611

DOCUMENT-IDENTIFIER: US 4866611 A

TITLE: Method for automatically reconciling entries on two copies of independently maintained electronic calendars

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 23. Document ID: US 4779191 A

L1: Entry 23 of 24

File: USPT

Oct 18, 1988

US-PAT-NO: 4779191

DOCUMENT-IDENTIFIER: US 4779191 A

TITLE: Method and apparatus for expanding the address space of computers

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 24. Document ID: US 4200495 A

L1: Entry 24 of 24

File: USPT

Apr 29, 1980

US-PAT-NO: 4200495

DOCUMENT-IDENTIFIER: US 4200495 A

TITLE: Prevention of defluidization in the treatment of  
caking carbonaceous solids

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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Terms	Documents
process adj2 reconciling	24

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Display

20

Documents, starting with Document:

24

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